

REMARKS

Claims 1-12 and 30-41 will be pending upon entry of the present amendment.
Claim 1 is amended and claim 41 is newly submitted with the present amendment.

Applicant thanks the Examiner for indicating the allowability of claims 38-40.

Claim rejections

The Examiner has rejected claims 1-12 and 30-37 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Furthermore, the Examiner has made the rejection final.

Applicant notes that the limitations of independent claims 1 and 30 cited by the Examiner as necessitating the rejection under Section 112 had not been previously amended from the original claims. Furthermore, while the current Office Action is the third Office Action relating to the present application, this is the first time that these claims have been rejected on this basis. Section 706.07(a) of the MPEP states the following:

“Under present practice, second or any subsequent actions on the merits shall be final, except where the Examiner introduces a new ground of rejection that is neither necessitated by the applicant’s amendment of the claims nor based on information submitted in an Information Disclosure Statement....”

Inasmuch as the current rejection is based on new grounds, and was neither necessitated by applicant’s amendment of the claim nor based on information submitted in an Information Disclosure Statement, applicant respectfully requests withdrawal of the finality of the Office Action, and entry of the present amendment.

MPEP Section 706.07 also states that

The applicant who is seeking to define his or her invention in claims that will give him or her the patent protection to which he or she is justly entitled should receive the cooperation of the Examiner to that end, and not be prematurely cut off in the prosecution of his or her application.... The Examiner should never lose sight of the fact that in every case the applicant is entitled to a full and fair hearing, and that a clear issue between applicant and Examiner should be developed, if possible, before appeal.

Applicant notes that there are no outstanding rejections over prior art, and that the remaining issues appear to be over matters of form and language. Accordingly, the applicant

respectfully requests the Examiner's indulgence in resolving these issues so that the present case can move forward to completion.

Responsive arguments

Amended claim 1 recites, in part, "forming integrated structures including semiconductor regions and isolation regions *at* a first wafer of semiconductor material..." Claim 1 is now clearly generic to all the species indicated by the Examiner as being independently patentable: The species of Figure 4 shows semiconductor and isolation regions formed in the substrate 2 of the wafer 1; and the species of Figures 10-12 show semiconductor and isolation regions formed on the substrate 54 of wafers 51, 81, and 101, respectively. In each case, the semiconductor and isolation regions may be said to be formed "at" the respective wafer.

It is the applicant's intent that claim 1 be read broadly to incorporate all the species. Applicant also calls the Examiner's attention to the language of new claim 41, discussed in more detail below, as another appropriate generic claim.

It remains the applicant's position that the terms "in" and "on," with reference to structures formed in association with a wafer, may be read broadly on structures formed either *in* or *on* the corresponding *substrate* of the wafer. Accordingly, independent claims 30, 34, 35, 36, and 37, are considered generic as written. Support for this position may be found in the specification by noting that, in the case of each embodiment described, the wafer or chip is described as including the respective substrate, which is given a separate reference numeral, as well as the respective structures. See, for example, the wafer 1 and substrate 2 of page 4, lines 13-26 (embodiment of Figure 4), the chip 51 and substrate 54 of page 9, lines 9-15 (Figure 10), the chip 81 of page 10, lines 25-28 and page 11, lines 15 and 16 (Figure 11), and the chip 101 of page 12, lines 13 and 14. Clearly, the terms "wafer" and "substrate" are not used synonymously.

In rejecting the independent claims, the Examiner has cited the reference numeral 54 as indicating the wafer of the respective claims. However, a reading of the above listed texts makes clear that reference numeral 54 refers only to the respective substrates of Figures 10-12, while reference numerals 51, 81, and 101 indicate the respective wafers, each of which includes the additional structures.

Applicant believes that claims 30, 34, 35, 36, and 37 are generic, and requests consideration of these claims on their merits.

New claim

The complete text of new claim 41 is included herebelow:

41. (New) A process for manufacturing an integrated device, comprising:
forming a first wafer including semiconductor regions and isolation regions;
forming a second wafer including interconnection structures of conductor material;
forming, on the second wafer, plug elements, each including a base region and a bonding region, the bonding region of a metal material different from the base region and capable of reacting with said semiconductor regions of said first wafer; and
bonding said first wafer and said second wafer together, including causing said bonding regions to react with said semiconductor regions.

Applicant presents claim 41 as being generic to all the species outlined by the Examiner in the recent Restriction Requirement. In the event that the Examiner disagrees with the applicant's arguments with respect to the allowability of claims rejected under Section 112, applicant requests that, upon a finding of allowability of either of claims 1 or 41, the Examiner give full consideration to the remaining claims, as being drawn to previously non-elected species claims.

It is the applicant's hope that the language of at least some of the independent claims will be accepted as generic, or that acceptable language can be soon arrived at, at which time the remaining independent claims will be amended accordingly, if necessary. Meanwhile, the applicant wishes to avoid unnecessary "exploratory" amendments to the claims.

The Examiner will recognize the difficulty in selecting a generic term that refers to the formation of structures associated with a semiconductor wafer, without limitation to "in" or "on." Should the Examiner continue to disagree with all of the applicant's positions, the applicant requests that the Examiner contact the undersigned representative at (206) 622-4900 in order to discuss alternative language and expeditiously resolve prosecution of this application.

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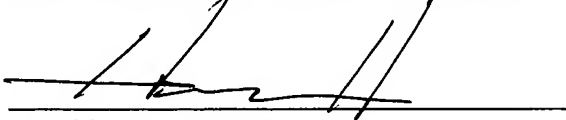
Reply to Office Action dated April 21, 2004

Favorable consideration and a Notice of Allowance are earnestly solicited.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

Respectfully submitted,

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